**Grassland Restoration at the Victorian Open Range Zoo**

**Case Study of the Grassy Ecosystem Network**



Brolgas were once a common sight on the western plains

Photo: Donna Smithyman

**The Vision**

Imagine going back almost two hundred years to the early settlement of Victoria. The vista that would greet you would be radically different from what you see today. Vast plains of native grasslands full of a staggering array of odd looking plants and animals. Now, most of what was there is gone and none of us can experience the depth of that view. However, work is currently being undertaken to re-establish a small amount of what was lost. Victoria's Open Range Zoo has taken a step forward to reconstructing the past.

In line with current zoo policy of conservation and education Victoria's Open Range Zoo at Werribee offered the perfect opportunity to work on one of Australia's most threatened ecological communities, our native grasslands, while at the same time promoting the savannahs, and their associated wildlife, of other countries.

There is no denying that as drawing cards Golden Sun Moths and Legless Lizards are not on top of everybody's list of things to see.

However their plight is as desperate as any threatened species throughout the world. The 'big' animals of the African and American plains (giraffes, zebra, antelope, bison, rhinos) do draw people to the zoo and once there, they are exposed to the Australian grassland exhibit.

**The Restoration**



Revegetation site at the Open Range Zoo, Werribee

Photo: Donna Smithyman

Native grassland restoration is an area in which we still have much to learn. Even putting back monocultures of native grass is fraught with failure as weeds wage an unforgiving battle for resources. Back in 1998 up to 60,000 native plants, grown from local indigenous seed, were planted as a beginning. Of those around 50% were propagated at the zoo itself with the assistance of the Friends of the Zoo.

Later, an area was set aside for the propagation of Wallaby grass or danthonia in order to help save the Golden Sun Moth. In the past the site had been the driveway to the old Werribee Mansion. To begin the revegetation the site was treated with herbicide then the soil was raked over to promote germination of the weed seed and herbicide applied again. This process was repeated at least twenty times. When the soil was bare danthonia plugs (or seedlings) were planted into prepared ground. Four species of danthonia were planted, approximately 50,000 plugs. A good survival rate was achieved but weeds started to once more invade the area. To assist in controlling the weeds the patch was burnt and has since had excellent danthonia recruitment.



Area of Danthonia planted for habitat for the Golden Sun Moth

Photo: Donna Smithyman

The danthonia area was set up as habitat for the rare Golden Sun Moth. The Moth's larvae live specifically on the roots of danthonia for two to ten years. Last year two individuals were caught and laid about 40 eggs in a box planted with danthonia, currently located at Melbourne Zoo. This success gives hope to the project's aim of having eggs introduced directly on to the danthonia at the Zoo site.

In 2002 the Volcanic Plains grassland and wetland exhibit has matured offering that glimpse into the past, but the Zoo is not stopping there. Staff members are enthusiastic about the possibilities of enhancing their grassland exhibit. Richard Rowe, Head of Horticulture and one of the instigators of the grassland theme, is planning to plant out an area of four hectares to native grasses (stipas, themeda, danthonias) to provide a more realistic impression of a grassy ecosystem.

Davin Kroeger, Head of Animals, is hoping that in the future it will be possible to have Red-bellied Pademelons, Swamp Skinks, Southern Earless Dragons, Fat-tailed Dunnarts and more waterfowl for a more natural exhibit. Also, as a connection the Zoo's role in the Eastern Barred Bandicoot Recovery Team Davin would like to see Eastern Barred Bandicoots roaming through display area. Presently on site are; Eastern Grey Kangaroos, Red-necked Wallabies, Brolga, Emu, Eastern barred Bandicoots (not on display), Striped Legless lizards housed in the interpretation area, and Southern Bell Frogs occurring naturally as do Tiger Snakes. Members of the Zoo staff are trained to carefully remove snakes from public areas.



**Education**

The Victorian Open Range Zoo, with its access to large numbers of the community, has taken on a big responsibility in educating people about grasslands. Helen Jones, a Safari Officer at the zoo, has developed the 'Spotto' Board to encourage people to actively discover what is in the grassland, and put a name to it. The 'Spotto' Boards are laminated A4 boards hanging on hooks identifying birds and plants that can be seen in the exhibit. These boards which are available at the start of the walk have been quite popular and are still only in their trial phase at the moment.

Helen believes that more work needs to be done on promoting grasslands and is considering surveying people to get an idea of their impression of what they are looking at. The information gained will be used to create future interpretative displays that will be targeted to build on people's appreciation of the ecosystem.

As can be the case with many conservation projects staff have had difficulty in finding out about what is happening in grasslands research/activities around the country. Their work on recovery teams and involvement with other local conservation groups finds duplication of projects, a lack of communication, and that other groups may have different agendas usually driven by resources or lack there of slowing progress for grassland conservation. A co-ordinated approach with clear objectives along with open communication between interested parties is required. This is something which the Grassy Ecosystem Network, a National Bushcare Project, is working towards solving.

It's fine to wax lyrical about the past splendours of our native grasslands but without an appreciation for what was there people will not recognise or even acknowledge the loss. The Victorian Open Range Zoo at Werribee is looking to resolve this dilemma. People are visual beings and to be able to experience first hand a little of what the Victorian Volcanic Plains once looked like can only aid its cause. The awareness triggered by the Zoo's grasslands exhibit that something splendid did once exist can only increase the chances of our last grassland remnants survival. And as far as the Zoo is concerned this is just the beginning.



(Right to left) Richard Rowe, Helen Jones, Davin Kroeger, Julie Kirkwood

Photo: Donna Smithyman



'Spotto' Boards at the entrance to the grassland exhibit

Photo: Donna Smithyman